



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,872	09/30/2005	Akihiro Ohashi	205700203313-US0	2013
7278 7590 03/29/2010 DARBY & DARBY P.C. P.O. BOX 770 Church Street Station New York, NY 10008-0770				
EXAMINER BOYLE, ROBERT C				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
03/29/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/551,872

**Applicant(s)**

OHASHI ET AL.

**Examiner**

ROBERT C. BOYLE

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. It is noted that Applicant has argued that the  $\text{Na}_2\text{O}$  present on the metal hydroxide is enabled because such metal hydroxides are commercially available. It is noted that the commercial availability of  $\text{Na}_2\text{O}$  has prompted the prosecution to proceed along at least two fronts. First, the availability of these surface modified metal hydroxides brings applicant's claims, which recite such metal hydroxides, within the scope of prior art-based rejections as set forth below. Second, the fact that these metal hydroxides are available does not however, please note, absolve applicant of the necessity of demonstrating that the instant claims are properly enabled given that a date issue is involved here viz. the applicant has not given clear and convincing evidence of the date of the publication where a metal hydroxide referred to as "Higilite" (on which applicant relies for enablement) was available. Applicant is reminded that his disclosure must be enabled as of the filing date of the instant application as set forth in MPEP 2164.05(a). The delay in prosecution is regretted.
3. To show commercial availability, Applicant has submitted three exhibits in the Remarks filed 8/20/2009 and 3/16/2010. The copyright date of 1992, as explained in the Remarks filed 3/16/2010 is not disputed. However, it is requested that the exhibits be entered in as evidence in a declarative format in accordance with 37 CFR 1.132 for probative weight. Additionally, as the exhibits are directed to a product with the tradename "HIGILITE" and that specific tradename does not appear in the specification, it is requested that the nexus requirement (see MPEP

716.01(b)) showing the connection between HIGILITE and the instant invention be explained.

The enablement rejection will be maintained until a proper declaration is received.

4. It is noted that the prior art, Tanaka (WO 2004/022650), qualifies as prior art under 102(a) with a publication date of 3/18/2004, which falls after the foreign priority date, 4/2/2003, of the instant application but is earlier than the effective filing date of 4/2/04 (i.e. the international filing date of the pct to which benefit is claimed) of the instant application. However, Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

5. It is noted that the prior art Nozaki (US 2004/0034121) qualifies as prior art under 102(e) with a filing date of 7/30/2003, which falls after the foreign priority date, 4/2/2003, of the instant application but is earlier than the effective filing date of 4/2/04 (i.e. the international filing date of the pct to which benefit is claimed) of the instant application. However, Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

#### ***Claim Rejections - 35 USC § 112***

6. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. The rejection is adequately set forth in paragraphs 7-14 in the office action mailed on April 27, 2009 and is incorporated here by reference. Please take note of paragraph 3 above.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by **Tanaka** (WO 2004/022650). As the cited WO publication is in a non-English language, the English equivalent, US 2006/0100313 ("Tanaka"), has been utilized in place of WO '650. All column and line number citations are made with respect to the above mentioned U.S. document.

10. As to claim 1, Tanaka teaches injection molded pellets comprised of a lactic acid resin "NatureWorks 40311D" and an aluminum hydroxide "Pyrolyzer HG" (¶99-100). It is noted that in Applicant's Remarks, filed 8/20/2'09, on pg. 5, third paragraph, Applicant states: "Other examples of commercially available metal hydroxides having w-N<sub>2</sub>O of 0.1% or less are provided in the original specification, and include: (i) "Pyrolyzer HG", for which w-Na<sub>2</sub>O is present in an amount equal to 0.05% by weight..." Furthermore, the instant specification, in Example 1 on pg. 30, uses a "NatureWorks" lactic acid resin with the "Pyrolyzer HG". Therefore, it is the examiner's position that the "Pyrolyzer HG" present in Tanaka satisfies the limitations of claim 1.

11. As to claim 2, Tanaka teaches using Bionolle 1003 as the aliphatic polyester in amounts of 20, 50, and 60 parts by mass (Table 1, ¶ 36-38, 111-113).

12. As to claim 3, Tanaka teaches 15% by mass of a talc filler (¶ 77) and examples with 10 and 20 % by mass of talc fillers (Table 1, ¶ 111-113).

13. As to claim 4, Tanaka teaches surface treating with silane coupling agents (¶ 47-49).
14. As to claim 5, Tanaka teaches examples with a decomposition rate of 2, 3, and 4% and impact strength of 16, 14, and 24 kJ/m<sup>2</sup> (Table 1, ¶ 111-113).
15. In the alternative, Tanaka forms the same product from the same materials as claimed. It is therefore inherent that the products of Tanaka would possess the claimed properties since such properties are evidently dependent on the nature of the composition used. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).
16. As to claim 6, Tanaka teaches aromatic aliphatic polyesters may be included in amounts of 20-60 parts by mass (Table 1, ¶ 34-38, 111-113).

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nozaki** (US 2004/0034121) in view of **Ahara** (JP 09-208740). As the cited JP publication is in a non-English language, the English computer translation ("Ahara"), has been utilized in place of JP '740. All column and line number citations are made with respect to the above mentioned translation.
19. As to claim 1, Nozaki teaches injection molded articles (¶ 55-57) of compositions of polylactic acid (abstract; 19-29, 60-63, Table 1, 66-69) with a flame retardant present in amounts

of 5, 10, and 30 % (¶ 42-45, 66-69, Table 3). Nozaki does not teach the metal hydroxide is the flame retardant.

20. However, Ahara teaches using aluminum hydroxide as a flame retardant in resin molding objects where the flame retardant is aluminum hydroxide has 0.3 wt% or less  $\text{Na}_2\text{O}$  concentration (¶ 1-6, 12-14, 16-21). It would have been obvious to use the flame retardant of Ahara because Ahara teaches aluminum hydroxide flame retardants do not generate poisonous gas, have high safety, have low price, and are chemically stable (¶ 5).

21. The range taught by Ahara overlaps the claimed range. It is well settled that where prior art describes the components of a claimed compound or compositions in concentrations within or overlapping the claimed concentrations a prima facie case of obviousness is established. See MPEP 2144.05; *In re Harris*, 409, F.3d 1339, 1343, 74 USPQ2d 1951, 1953 (Fed. Cir 2005); *In re Peterson*, 315 F.3d 1325, 1329, 65 USPQ 3d 1379, 1382 (Fed. Cir 1997); *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (CCPA 1990); *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974).

22. As to claim 2, Nozaki teaches examples with a 1:1 mixture of polylactic acid and polybutylene succinate (Table 1; ¶ 60-62).

23. As to claim 3, Nozaki teaches a filler, such as talc, of 5-50 mass % (abstract). This range overlaps the claimed range.

24. As to claim 4, Ahara teaches the aluminum hydroxide is surface treated with fatty acids (¶ 20).

25. As to claim 5, Nozaki and Ahara do not teach the degradation or impact properties. However, Nozaki and Ahara teaches essentially the same composition and process as that of the

claimed, and one of ordinary skill in the art would have a reasonable basis to believe the composition of Nozaki and Ahara exhibits essentially the same properties. Since the PTO cannot conduct experiments, the burden of proof is shifted to the applicants to establish an unobvious difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

26. Even if properties of the composition of the instant claims and the prior art examples are not the same, it would still have been obvious to one of ordinary skill in the art to make a composition having the claimed properties because it appears that the references generically embrace the claimed composition and one of ordinary skill in the art would have expected all embodiments of the reference to work. Applicants have not demonstrated that the differences, if any, between the claimed composition and the prior art give rise to unexpected results.

27. As to claim 6, Nozaki teaches examples of the biodegradable resins include aliphatic aromatic polyesters (¶ 22) and 1:1 mixtures of polylactic acid and a second polyester (Table 1; ¶ 60-62).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT C. BOYLE whose telephone number is (571)270-7347. The examiner can normally be reached on Monday-Thursday, 9:00AM-5:00PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert C. Boyle/  
Examiner, Art Unit 1796

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796